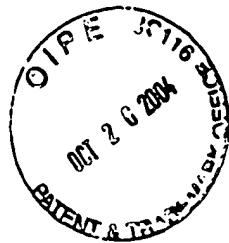


EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



PTO/SB/08A (10-01)

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 10

Complete if Known

Application Number	10/666,671
Filing Date	9/17/03
First Named Inventor	Shi
Art Unit	1765
Examiner Name	Not Yet Assigned

Attorney Docket Number P118-US

U.S. PATENT DOCUMENTS

Examiner Initials ¹	Cite No. ¹	Document Number Number- Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
LV	AA	US- 3,511,727	05-12-1970	Hays, R.G.	
	AB	US- 4,190,488	02-26-1980	Winters, H.F.	
	AC	US- 4,310,380	12-12-1982	Flamm et al.	
	AD	US- 4,498,953	02-12-1985	Cook et al.	
	AE	US- 4,695,700	09-22-1987	Provence et al.	
	AF	US- 4,740,410	04-26-1988	Muller et al.	
	AG	US- 4,749,440	06-07-1988	Blackwood et al.	
	AH	US- 4,789,426	12-05-1988	Pipkin, M.A.	
	AI	US- 5,206,471	04-27-1993	Smith, D.K.	
	AJ	US- 5,330,301	07-19-1994	Brancher, C.D.	
	AK	US- 5,439,553	08-08-1995	Grant et al.	
	AL	US- 5,534,107	07-09-1996	Gray et al.	
	AM	US- 5,672,242	09-30-1997	Jen, J.	
	AN	US- 5,716,495	02-10-1998	Butterbaugh et al.	
	AO	US- 5,726,480	03-10-1998	Pister, K.S.	
	AP	US- 5,753,073	05-19-1998	Jen, J.	
	AQ	US- 5,757,456	05-26-1998	Yamazaki et al.	
	AR	US- 5,835,256	11-10-1998	Huibers, A.	
	AS	US- 5,858,065	01-12-1999	Li et al.	
LV	AT	US- 6,022,456	02-08-2000	Manning	

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Examiner Initials ¹	Cite No. ¹	Foreign Patent Document Country Code ³ -Number ⁴ - Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
LV	BA	EP-0704884-A2	04-03-1996	Mehta, J.		
	BB	EP-0822582-A2	02-04-1998	Bhardwai, J.K.		
	BC	EP-0822584-A2	04-04-1998	Bhardwai, J.K.		
	BD	EP-0838839-A2	04-29-1998	Bhardwai, J.K.		
	BE	EP-0878824-A2	11-18-1998	McQuarrie et al.		
	BF	EP-0878824-A3	01-19-2000	McQuarrie et al.		
	BG	EP-0955668-A2	11-10-1999	Yao et al.		
	BH	WO-98/05605	02-12-1998	Bhardwai, J.K.		
	BI	WO-98/13856	04-02-1998	Bhardwai, J.K.		
LV	BJ	WO-98/32163	07-23-1998	Tai et al.		

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 2 of 10

Complete If Known

Application Number	10/666,671
Filing Date	9/17/03
First Named Inventor	Shi
Art Unit	1765
Examiner Name	Not Yet Assigned

Attorney Docket Number P118-US

U.S. PATENT DOCUMENTS

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		Number- Kind Code ² (if known)			
LV	AU	US- 6,051,503	04-18-2000	Bhardwaj, J.K.	
	AV	US- 6,162,367	12-19-2000	Tai et al.	
	AW	US- 6,277,173 B1	08-21-2001	Sadakata et al.	
	AX	US- 6,290,864 B1	09-18-2001	Patel et al.	
	AY	US- 6,328,801 B1	12-11-2001	Gary et al.	
	AZ	US- 6,334,928 B1	03-12-2002	Sekine et al.	
	AA	US- 6,355,181 B1	03-12-2002	McQuarie, A.D.	
	AB	US- 2001/0002663 A1	06-07-2001	Tai et al.	
	AAC	US- 2002/0033229 A1	03-21-2002	Lebouitz et al.	
		US- 2003/0054588	03-20-2003	Patel, et al.	
		US- 2002/0185699	12-12-2002	Reid	
		US- 2002/0121502	09-15-2002	Patel, et al.	
		US- 2002/0047172	04-25-2002	Reid	
		US- 6,436,229	08-20-2002	Tai, et al.	
		US-			
		US- 2002/0196524	12-26-2002	Huibers, et al.	
		US- 2003/0166342	09-04-2003	Chinn, et al.	
		US- 6,409,876	6-25-2002	McQuarie, et al.	
		US- 6,398,619	5-28-2002	Huibers, et al.	
		US- 6,576,489	6-10-2003	Leung	

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Examiner Initials ¹	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ - Kind Code ⁵ (if known)				
LV	BK	WO-99/01887	01-14-1999	Lea et al.		
	BL	WO-99/03313	01-21-1999	Lea et al.		
	BM	WO-99/49506	09-30-1999	McQuarie, A.D.		
	BN	WO-00/52740	08-08-2000	Bhardwaj et al.		
	BO	JP-1982/57098679-A	06-18-1982	Tsunetoshi, A.		
	BP	JP-1983/58130529-A	08-04-1983	Yoshihiro et al.		
	BQ	JP-1985/60057938-A	04-03-1985	Katsumi et al.		
	BR	JP-1986/61053732-A	03-17-1986	Arata et al.		
	BS	JP-1986/61134019-A	06-21-1986	Shinji et al.		
LV	BT	JP-1986/61181131-A	08-13-1986	Shinji et al.		

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INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

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Sheet

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of

10

Complete if Known

Application Number	10/666,671
Filing Date	9/17/03
First Named Inventor	Shi
Art Unit	1765
Examiner Name	Not Yet Assigned

Attorney Docket Number P118-US

U.S. PATENT DOCUMENTS

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LV		US- 6,238,581	5-29-2001	Hawkins, et al.	
		US- 6,115,172	9-5-2000	Jeono	
		US- 6,204,080	3-20-2001	Hwang	
		US- 2003/0071015	4-17-2003	Chinn, et al.	
		US- 2002/0164879	11/07/02	Leung, et al.	
		US- 2003/0077878	4-24-2003	Kumar	
		US- 6,197,610	3-6-2001	Toda	
		US- 6,500,356	12-31-2002	Goto, et al.	
		US- 2003/0124848	7-3-2003	Chinn, et al.	
		US- 2003/0219986	11-27-2003	Rattner	
		US- 4,551,197	11-5-1985	Guilmette	
		US- 2004/0069747	4-15-2004	Patel, et al.	
		US- 2002/0195423	12-26-2002	Patel, et al.	
		US- 2004/0035821	2-26-2004	Doan, et al.	
		US- 2002/0163051	11-17-02	Gopal	
		US-			

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LV	BU	JP-1986/61187238-A	08-20-1986	Nobuo et al.		
	BV	JP-1986/61270830-A	12-01-1986	Toru, T.		
	BW	JP-1987/62071217-A	04-01-1987	Toru et al.		
	BX	JP-1988/63155713-A	06-28-1988	Tadashi, F.		
	BY	JP-1989/01208834-A	08-22-1989	Nobuo et al.		
	BZ	JP-1989/10217921-A	08-31-1989	Tsuneo et al.		
	CA	JP-1990/02250323-A	10-08-1990	Susumu et al.		
	CB	JP-1991/03012921-A	01-21-1991	Nobuo et al.		
	CC	JP-1992/04096222-A	03-27-1992	Atsuyuki, A.		
LV	CD	JP-1995/07029823-A	01-31-1995	Hiroshi, T.		

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Application Number	10/666,671
				Filing Date	9/17/03
				First Named Inventor	Shi
				Art Unit	1765
				Examiner Name	Not Yet Assigned
Sheet	4	of	10	Attorney Docket Number P118-US	

U.S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS					
Examiner Initials	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)			
UV / UV	CE	JP-1997/09251981-A	09-22-1997	Kazuaki et al.	
	CF	JP-1998/10313128-A	11-24-1998	Hammin et al.	
	CG	JP-1998/10317169-A	12-02-1998	McQuarie et al.	

Examiner Signature		Date Considered	5/10/05
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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet 5 of 10

Complete if Known

Application Number	10/666,671
Filing Date	9/17/03
First Named Inventor	Shi
Group Art Unit	1/65
Examiner Name	Not Yet Assigned
Attorney Docket Number	P118-US

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
LV	DA	ALIEV et al., "Development of Si(100) Surface Roughness at the Initial Stage of Etching in F2 and XeF2 Gases Ellipsometric Study", Surface Science 442 (1999), pp. 206-214.	
	DB	GLIDEMEISTER, J.M., "Xenon Difluoride Etching System" (Nov. 17, 1997).	
	DC	HABUKA et al., "Dominant Overall Chemical Reaction in a Chlorine Trifluoride-Silicon-Nitrogen System at Atmospheric Pressure", Japan Journal of Applied Physics Vol. 38 (1999), pp. 6466-6469.	
	DD	HECHT et al., "A Novel X-ray Photoelectron Spectroscopy Study of the Al/SiO2 Interface", J. Appl. Phys. Vol. 57 (June 15, 1985), pp. 5256-5261.	
	DE	HOULE, F.A., "Dynamics of SiF4 Desorption During Etching of Silicon by XeF2", IBM Almaden Research Center (April 15, 1987), pp. 1866-1872.	
	DF	FLAMM et al., "XeF2 and F-Atom Reactions with Si: Their Significance for Plasma Etching", Solid State Technol. 26, 117 (1983).	
	DG	IBBOTSON et al., "Plasmaless Dry Etching of Silicon with Fluorine-containing Compounds", J. Appl. Phys. Vol. 56 No. 10 (Nov. 1984), pp. 2939-2942.	
	DH	IBBOTSON et al., "Comparison of XeF2 and F-atom Reactions with Si and SiO2", Applied Physics Letter, Vol. 44, 1129 (1984).	
LV	DI	STRELLER et al., "Selectivity in Dry Etching of Si (100) and XeF2 and VUV Light", Elsevier Science B.V., Applied Surface Science Vol. 106 (1996), pp. 341-346.	
	DJ		
	DK		

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 6 of 10

Complete if Known

Application Number	10/666,671
Filing Date	9/17/03
First Named Inventor	Shi
Group Art Unit	1765
Examiner Name	Not Yet Assigned
Attorney Docket Number	P118-US

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials ¹	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T2
LV	DL	WINTERS, H.F., "Etch Products from the Reaction of XeF ₂ with SiO ₂ , SiO ₃ , Si ₃ N ₄ , SiC, and Si in the Presence of Ion Bombardment", J. Vac. Sci. Technol. B 1(4) (Oct/Dec 1983), pp. 927-931.	
	DM	WINTERS et al., "The Etching of Silicon with XeF ₂ Vapor", Appl. Phys. Letter, Vol. 34(1) (January 1, 1979), pp. 70-73.	
	DN	XACTIX, Inc., Marketing Brochure (June 27, 1999).	
	DO	"Xenon Difluoride Isotropic Etch System: Seeing is Believing", Surface Technology Systems Ltd. brochure, Newport, UK (date unknown).	
	DP	Assorted promotional literature, Surface Technology Systems Ltd., Newport, UK (July 28, 1999).	
Kurt Williams, Etch Rates for Micromachining Processing-Part II, 2003 IEEE, Pgs 761-778, Journal of Microelectromechanical Systems, Vol. 12, No. 6, December 2003.			

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SignatureDate
Considered

5/10/03

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 7 of 10

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Group Art Unit	1765
Examiner Name	Not Yet Assigned

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V	BA	ANDERSON, H.M., "Plasma Diagnostics for Semiconductor Processing", 2000 Digest of the LEOS Topical Meetings (July 24 - 28, 2000), pp. 117-118 (abstract only).	
	BB	BARYSHEV et al., "Monitoring of XeO_2/Si Plasma Etching and End-Point Detection", Mikroelektronika (Russia), Vol. 25, No. 5 (Sep/Oct 1996), pp. 373-379 (abstract only).	
	BC	BASSOM et al., "Modeling and Optimizing XeF_2 -enhanced FIB Milling of Silicon", 25th International Symposium for Testing and Failure Analysis, Santa Clara, CA (Nov. 14 -18, 1999), pp. 255-261 (abstract only).	
	BD	BERG et al., "Real-Time Control of Etching Processes: Experimental Results", Proceedings of the SPIE - The International Society for Optical Engineering, Vol. 3213 (1997), pp. 249-260 (abstract only).	
	BE	CHAMBERS et al., "Endpoint Uniformity Sensing and Analysis in Silicon Dioxide Plasma Etching Using In Situ Mass Spectrometry", J. Vac. Sci. Technol. B, Microelectron. Nanometer Struct., Vol. 16, No. 6 (Nov/Dec 1998), pp. 2996-3002 (abstract only).	
	BF	CHAN et al., "Gas Phase Pulse Etching of Silicon for MEMS with Xenon Difluoride", Engineering Solutions for the Next Millennium: 1999 IEEE Canadian Conference on Electrical and Computer Engineering, Edmonton, Alberta, Vol. 3 (May 9 - 12, 1999), pp. 1637-1642 (abstract only).	
	BG	CHANG et al., "Gas-Phase Silicon Micromachining with Silicon Difluoride", Proceedings of the SPIE - The International Society for Optical Engineering, Vol. 2641 (1995), pp. 117-128 (abstract only).	
	BH	CHEN et al., "Spatially Resolved Endpoint Detector for Plasma Etcher", 1997 IEEE International Symposium on Semiconductor Manufacturing Conference Proceedings, San Francisco, CA (Oct. 6 - 8, 1997), pp. B45 - B48 (abstract only).	
	BI	CHU et al., "Controlled Pulse-Etching with Xenon Difluoride", International Solid State Sensors and Actuators Conference (Transducers '97), Chicago, IL, Vol. 1 (June 16 - 19, 1997), pp. 665-668 (abstract only).	
	BJ	HEINRICH et al., "Multichannel Process Monitor for Real-Time Film Thickness and Rate Measurements in Dry Etching and Deposition", Vacuum, Vol. 51, No. 4, (Dec. 1998), pp. 497-502 (abstract only).	
V	BK	KOHLER et al., "Fabrication of Microlenses by Plasmaless Isotropic Etching Combined with Plastic Moulding", Sens. Actuators A, Phys. (Switzerland), Vol. A53, No. 1-3 (May 1996), pp. 361-363 (abstract only).	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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8 of 10

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Group Art Unit	1765
Examiner Name	Not Yet Assigned

Attorney Docket Number P118-US

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LV	BL	LI et al., "Mass Spectrometric Measurements on Inductively Coupled Fluorocarbon Plasmas: Positive Ions, Radicals and Endpoint Detection", J. Vac. Sci. Technol. A, Vac. Surf. Films, Vol. 17, No. 5 (Sept. 1997), pp. 2438-2446 (abstract only).	
	BM	LIAMANOND et al., "Production Data Based Optimal Etch Time Control Design for a Reactive Ion Etching Process", IEEE Trans. Semicond. Manuf., Vol. 12, No. 1 (Feb. 1999), pp. 139-147 (abstract only).	
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9 of 10

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Application Number	10/666,671
Filing Date	9/17/03
First Named Inventor	Shi
Group Art Unit	1765
Examiner Name	Not Yet Assigned

Attorney Docket Number P118-US

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials ¹	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
LV	BW	SEBEL et al., "Reaction Layer Dynamics in Ion-Assisted Si/XeF ₂ Etching: Temperature Dependence", J. Vac. Sci. Technol. A, Vac. Surf. Films, Vol. 18, No. 6, (Nov. 2000), pp. 2759-2769 (abstract only).	
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UV	CH	WARNEKE, et al., "In Situ Characterization of CMOS Post-Process Micromachining", <i>Sens. Actuators A, Phys.</i> (Switzerland), Vol. A89, No. 1-2 (March 20, 2001), pp. 142-151 (abstract only).	
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UV	CK	WONG et al., "Endpoint Prediction for Polysilicon Plasma Etch Via Optical Emission Interferometry", <i>J. Vac. Sci. Technol. A, Vac. Surf. Films</i> , Vol. 15, No. 3, Pt. 2 (May/June 1997), pp. 1403-1408 (abstract only).	
UV	CL	YUE et al., "Plasma Etching Endpoint Detection Using Multiple Wavelengths for Small Open Area Wafers", <i>J. Vac. Sci. Technol. A, Vac. Surf. Films</i> , Vol. 19, No. 1 (Jan. 2001), pp. 66-75 (abstract only).	

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